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Subject: Docket Number USCG-2003-14273

What follows is Aquacide's response to subject Notice .Our comments will be aligned with the format of the notice and will conclude with a short summary.

Discussion of Proposed Rulemaking

The proposed Rule makes a Ballast Water Management (BWM) program mandatory. Previous Coast Guard projects and Notices, pursuant to the regulatory process, have addressed the components of a BWM program, including standards, technology, and non-compliance. The responses to these Notices indicate general agreement within the community as to the nature of these components. A timetable is discussed and is included in pending legislation, NAISA 2003. Therefore, this Notice should be the vehicle with which to build a BWM program leading to Zero Discharge. We will provide our views of such a program.

Beginning in 1990, legislation clearly shows Congress' intention to prevent .the introduction of NIS into U.S. waters, i.e., Zero Discharge.

But absent any incentives to employ treatment programs which attempt to reach Zero Discharge, Ballast Water Exchange (BWE) has become the default BWM program.

Earlier efforts have addressed the effectiveness of BWE, its many shortcomings and the intercoastal exemption. BWE may be better than nothing, but there are so many variables (as demonstrated in an amendment to this Notice) that it cannot be quantified. Since it cannot be quantified, it cannot be regulated meaningfully. Congress, recognizing this, labels BWE "interim."

Until the Coast Guard arbitrarily quantifies "as effective as BWE," it is illogical to be concerned about such things as empty/refill vs. flow-through methods of BWE or how many miles offshore to perform the operation or the depth of the water. Resources should be focused on BWM programs that clearly move toward Zero Discharge.

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Absent an arbitrary decision by the Coast Guard, BWE is undefined and unmeasurable, and would fail any logical cost benefit analysis. Accordingly, if BWE must be the default mode of BWM, we recommend that rules governing it be as simple to comply with and to enforce as possible. A check of the ship's log would probably suffice.

The Discussion of this Notice lists four options for BWM: retain, exchange, discharge to an approved facility, and treat. Since the first three are not practical and/or do not lead to Zero Discharge, the only viable option is Ballast Water Treatment (BWT). We will address this option.

Strong agreement exists within the community on several treatment issues including interim standards. Responses to previous Notices show unanimous support for them, from shippers to Governors, and they are in the pending legislation. They would incorporate lessons learned at each step, from a regulatory point of view as well as from the biological and technological points of view. And without interims, the stimulus for experimental treatment technology will be lacking.

When standards are mandated, they must be stated and defined explicitly and must include measurement protocols that are specifically stated and use commonly accepted yardsticks. Without these protocols, standards are meaningless. Physical size (so many microns) is one such measure. There also are commonly used biological measures that were referred to in USCG 9267 that are favored by the scientific community and currently employed in the field by Agencies like the EPA. These include Biochemical Oxygen Demand (BOD) and Oxygen Uptake Rate (OUR).

Standards should not be stated in terms subject to interpretation like "as clean as drinking water" or "as effective as BWE," nor should they be contingent, using terms like "to be developed." An abundance of hard data currently exists with which to define standards with precision.

Programs like grandfathering discussed in the responses to USCG 9267 must protect and encourage investments in treatment technology because the resources involved are substantial. Billions of dollars will be required for retrofit and new construction.

BWM is a dynamic program. New NIS appear, and when pathogens affecting human health appear, making the situation a public health matter, the program must be flexible and responsive. Ballast borne bioterrorism has been discussed publicly, and while not a known concern at the moment, it could surface publicly overnight as a major threat. This, of course, is a mission of the Coast Guard and its parent Department.

Other flexibility needs are evident. Some member nations of the International Maritime Organization (IMO) have different standards, as do some U.S. states. A treatment program ideally would allow a shipper to move cargo among several ports having different discharge standards. We will discuss domestic preemption under Federalism..

Because of these dynamic demands, the Coast Guard, where possible, should encourage technologies that are flexible, quickly responsive, and which minimize the time and additional resources needed to cope with rapidly changing requirements.

Since the mandated program must progress toward Zero Discharge, interim standards will correspondingly progress to more demanding ones. Therefore, those technologies that minimize the costs of these transitions should be favored. With some technologies, this could be a major cost, while with others, the additional costs would be quite modest. For example, increased filtration and/or UV could require large, expensive new equipment to maintain the required flow rate. Stronger chemicals could require stainless steel piping.. Thermal pasteurization, by contrast, merely requires the addition of already available heat to meet any higher standards.

Federalism

One way to address preemption, which well may become a major issue, is the military approach. When Higher Headquarters issues a regulation, subsidiary headquarters (Subs)

have the option of issuing a supplement to the regulation, as long as it is more stringent. Similarly, Subs to the Subs may also issue their own supplements.

With this approach to BWM issues, if California, for example, wants a higher standard than the Federal standard, it could issue a supplement which would only be enforced in California. Similarly, the Port of Oakland could issue its own supplement.

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Regulatory Evaluation

USCG 10486 addressed cost benefit analysis in detail. Those respondents who commented on this issue were in general agreement on the cost data provided as part of that Notice. Therefore, the USCG 10486 cost data should be used for present purposes.

There was considerable concern among the respondents that the benefit side of the equation was too low and costs to the environment were understated in the data provided. We question, therefore, the data provided in the current Notice which further understates these costs to the environment. Understating the problem will not make it go away.

Summary

This Notice is the Coast Guard's opportunity to build a BWM program that will lead to Zero Discharge. Previous projects provide the agreed to tools and Congress has directed the Coast Guard to build such a program.

The program should lead to Zero Discharge, should have modest life cycle costs, and should be simple to perform and to regulate. It should minimize non-productive port time, and be able to accommodate varying discharge standards and the presence or absence of shore facilities.

An ideal program would be one whereby a ship can take on ballast at any port and upon arrival at destination, be capable of Zero Discharge. Other than pasteurization, we know of no current technology which can approach this ideal. But given the proper incentives, technology will improve and a "silver bullet" may emerge.

At the moment, Exchange may be the default Management program, but it should be viewed only as a first intermediate step on the time line toward the Zero Discharge goal. And as BWE cannot be regulated meaningfully, the Rules governing it should be minimal. Succeeding interim phases, to be practical and to lead to Zero Discharge, will, by necessity, require Treatment.

Besides leading to Zero Discharge, these interim treatment phases should be on a timetable and have explicit standards and measurement protocols. They should minimize, where possible, the substantial costs to the maritime industry by incorporating such things as grandfathering. They should encourage technologies that minimize the costs of increasing stringency of requirements and differing requirements which may be imposed by various port authorities. And the Coast Guard must always keep in mind the need for rapid response to increased threat, be it natural or man-made.

In short, the Coast Guard now has the tools to begin the mandated program that will tell the owners where they must commit resources, which, in turn, will lead the builders, innovators and engineers into making things happen that will begin to Stem the Tide.